

a mechanically active filter member disposed inside the housing in the flow path; and

a chemically active filter member disposed inside the housing in the flow path;

wherein the chemically active filter member comprises a plurality of particles retained in said oil filter comprising a beneficial additive to interact with engine oil as said engine oil circulates through the filter, said particles comprising an oil conditioning agent retained in said particles selected from the group consisting of imidazoline-phosphonate salts, substituted triazoles, sulfurized carboxylates, phenolic compounds, arylamino compounds, substituted thiazoles, substituted thiadiazoles, phosphosulfurized olefins, zinc dithiophosphates, and zinc dialkyldithiophosphates, aromatic sulfides, aromatic polysulfides, alkyl sulfides, alkyl polysulfides, sulfurized olefins, sulfurized carboxylic acid esters, sulfurized ester-olefins, and mixtures thereof.

A1
cont'd

7. (amended) An oil filter, comprising:

a hollow housing having a tapping plate for placement proximate an engine surface, said tapping plate having an outlet aperture formed therethrough and an inlet aperture formed therethrough and spaced apart from said outlet aperture;

A2

a mechanically active filter element disposed within said housing spaced away from said tapping plate;

a substantially cylindrical dividing wall member disposed within said housing adjacent said tapping plate; said dividing wall member defining an inlet flow channel on the outside thereof within the housing and in fluid communication with said inlet aperture of said tapping plate, said dividing wall member further defining an outlet flow channel therein in fluid communication with said outlet aperture of said tapping plate; and

a chemically active filter member disposed within said inlet flow channel of said housing between said tapping plate and said mechanical filter element,

A₂
cont.

said chemically active filter member comprising a plurality of particles retained in said oil filter having a diameter in a range of 0.10 to 5 mm, said particles comprising a beneficial additive to interact with engine oil as said engine oil circulates through the filter, said beneficial additive comprising

an oil conditioning agent, retained in said particles, selected from the group consisting of imidazoline-phosphonate salts, substituted triazoles, sulfurized carboxylates, phenolic compounds, arylamino compounds, substituted thiazoles, substituted thiadiazoles, phosphosulfurized olefins, zinc dithiophosphates, and zinc dialkyldithiophosphates, aromatic sulfides, aromatic polysulfides, alkyl sulfides, alkyl polysulfides, sulfurized olefins, sulfurized carboxylic acid esters, sulfurized ester-olefins, and mixtures thereof.

11. (amended) An oil filter, comprising:

a hollow housing having an inlet and an outlet and defining a chamber therein with a flow path between the inlet and outlet;

A3
a mechanically active filter member disposed inside the housing in the flow path; and

a chemically active filter member disposed inside the housing in the flow path;

wherein the chemically active filter member comprises a plurality of particles retained in said oil filter comprising a beneficial additive to interact with engine oil as said engine oil circulates through the filter, said particles comprising an antioxidant retained in said particles.

13. (amended) A supplemental cartridge for use in conjunction with an oil filter, said supplemental cartridge comprising:

A1
a hollow housing, comprising
a tapping plate for placement proximate an engine surface, said tapping plate having an outlet aperture formed substantially centrally therethrough and an inlet aperture formed therethrough and spaced apart from said outlet aperture;

a cap opposite said tapping plate for placement proximate an oil filter, said cap having an inlet aperture formed substantially centrally therethrough and an outlet aperture formed therethrough and spaced apart from said inlet aperture;

an outer wall connecting said cap and said tapping plate;

a substantially cylindrical dividing wall member disposed within said housing and separating said housing interior into an inlet flow channel in fluid communication with said inlet aperture of said tapping plate, and an outlet flow channel in fluid communication with said outlet aperture of said tapping plate; and

A4
a chemically active filter member disposed within said inlet flow channel of said housing, said chemically active filter member comprising a plurality of particles having a diameter in a range of 0.10 to 5 mm, said particles comprising:

cont.
an oil conditioning agent, disposed in said particles so as to be retained therein when contacted with engine oil, selected from the group consisting of imidazoline-phosphonate salts, substituted triazoles, sulfurized carboxylates, phenolic compounds, arylamino compounds, substituted thiazoles, substituted thiadiazoles, phosphosulfurized olefins, zinc dithiophosphates, and zinc dialkyldithiophosphates, aromatic sulfides, aromatic polysulfides, alkyl sulfides, alkyl polysulfides, sulfurized olefins, sulfurized carboxylic acid esters, sulfurized ester-olefins, and mixtures thereof.